

VII Leopoldo García-Colín Mexican Meeting on Mathematical and Experimental Physics



Contribution ID: 96

Type: **not specified**

JOSÉ LUIS HERNÁNDEZ: Enhanced light transmission in disordered metallic nanoisland films.

Thursday, 20 February 2020 16:00 (45 minutes)

In this talk we will present a brief historical review about metallic films with arrays of ordered holes which present extraordinary optical transmission. Then, the transmission properties of thin gold, copper and silver films deposited on quartz by pulsed laser deposition are presented. Well before the deposited metal forms a continuous film, these metals form islands on the substrate, when these islands reach a critical distance, the light transmission near the surface plasmon resonance frequency is enhanced. These results remind of extraordinary optical transmission, however, instead of having relatively sharp peaks of transmission at characteristic frequencies, in our experiments broad peaks are observed.

Session Classification: SHORT TALKS

Track Classification: SYMPOSIUM ON LASER ABLATION